

## OPTICAL TRANSMITTER

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### Abstract

**PURPOSE:** To detect partial reflection from a light-emitting device efficiently, and to stabilize an optical output by housing a control circuit keeping the optical output approximately constant and a ray converging means into a single package on the basis of the optical output signals of the light-emitting device and a driver circuit and a photo-sensor detecting a part of output rays.

**CONSTITUTION:** Output rays X from a light-emitting device 1 are formed in pulses driven by a driver circuit, and output to the outside of a package from the outgoing section of the package 28 for a transparent cap. A part of output rays is partially reflected by the package 28 for the cap, and the partially reflected rays are projected to a plurality of convex lenses 32 as rays Y for detection. Irregularly reflected rays in a hollow section 30 are also projected to a plurality of the convex lenses 32 as rays Y for detection, and converged to photo-sensors 18 respectively. Accordingly, even when inspection rays Y composed of partially reflected rays, etc., are weak, optical sensibility in the photo-sensors 18 is improved. Detected optical signals in the photo-sensors 18 are used for controlling the driver circuit of the negatively fed back light-emitting device 12.

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